

AMENDMENTS TO THE CLAIMS

Claims 1-38 (Canceled)

Claim 39 (Currently Amended) A telephone for transmitting ~~a first transmission~~ an uplink signal to a base station and receiving a ~~second transmission~~ first downlink signal and a ~~second downlink signal from the base station~~, comprising:

- a modulator operable to modulate a first data stream according to a QPSK to produce a modulated signal;

- a transmitter operable to transmit the modulated signal as the ~~first transmission~~ uplink signal;

- a receiver operable to receive the ~~second transmission~~ first downlink signal and the second downlink signal, wherein the ~~second transmission~~ first downlink signal has information of data for demodulation and the second downlink signal has information of a second data stream ~~and a third data stream~~, the ~~second data stream~~ first downlink signal is modulated according to a QPSK and the ~~third data stream~~ second downlink signal is modulated according to an n-level PSK or an n-level QAM, wherein the data for demodulation includes information representing the value of n; and

- a demodulator operable to demodulate the ~~second transmission~~ first downlink signal to produce the data for demodulation and demodulate the second downlink signal to produce the second data stream, wherein the second data stream is produced according to the data for demodulation; ~~and the third data stream~~

wherein a data rate of the second downlink signal is changeable.

Claim 40 (Previously Presented) A telephone according to claim 39, wherein n is an integer and equal to or greater than 4.

Claims 41-44 (canceled)

Claim 45 (Currently Amended) A telephone for transmitting a ~~first transmission~~ an uplink signal to a base station and receiving a ~~second transmission~~ a first downlink signal and a second downlink signal from the base station, comprising:

- a modulator operable to modulate a first data stream according to a QPSK to produce a ~~first-modulated~~ signal;

- a multiplexer operable to convert the ~~first-modulated~~ signal to a CDMA converted signal according to CDMA;

- a transmitter operable to transmit the CDMA converted signal as the ~~first transmission~~ uplink signal;

- a receiver operable to receive the ~~second transmission~~ first downlink signal and the second downlink signal, wherein the ~~second transmission~~ first downlink signal has information of data for demodulation and the second downlink signal has information of a second data stream ~~and a third data stream~~, the ~~second data stream~~ first downlink signal is modulated according to a QPSK, and the ~~third data stream~~ second downlink signal is modulated according to an n-level PSK or an n-level QAM, wherein the data for demodulation includes information representing the value of n;

- a de-multiplexer operable to convert the ~~second transmission~~ first downlink signal to a ~~second-modulated~~ first de-multiplexed signal and convert the second downlink signal to a ~~second de-multiplexed signal~~, according to CDMA; and

- a demodulator operable to demodulate the ~~second-modulated~~ first de-multiplexed signal to produce the data for demodulation and demodulate the second de-multiplexed signal to produce the second data stream, wherein the second data stream is produced according to the data for demodulation; and the third data stream

wherein a data rate of the second downlink signal is changeable.

Claim 46 (Previously Presented) A telephone according to claim 45, wherein n is an integer and equal to or greater than 4.

Claims 47-50 (Canceled)

Claim 51 (Currently Amended) A base station for receiving ~~a first transmission~~ an uplink signal from a telephone and transmitting ~~a second transmission~~ a first downlink signal and a second downlink signal to the telephone, comprising:

~~— a modulator operable to modulate a first data stream according to a QPSK and modulate a second data stream according to an n-level QAM to produce modulated signals;~~

~~— a transmitter operable to transmit the modulated signals as the second transmission signal;~~

- a receiver operable to receive the ~~first transmission~~ uplink signal, wherein the ~~first transmission~~ uplink signal has information of a ~~third~~ first data stream, and the ~~third~~ first data stream is modulated according to a QPSK; and

- a demodulator operable to demodulate the ~~first transmission~~ uplink signal to produce the ~~third~~ first data stream;

- a modulator operable to modulate data for demodulation according to a QPSK to produce a first modulated signal and modulate a second data stream according to an n-level PSK or an n-level QAM to produce a second modulated signal, wherein the data for demodulation includes information representing the value of n; and

- a transmitter operable to transmit the first modulated signal as the first downlink signal and transmit the second modulated signal as the second downlink signal;

wherein a data rate of the second downlink signal is changeable.

Claim 52 (Previously Presented) A base station according to claim 51, wherein n is an integer and equal to or greater than 4.

Claims 53-56 (Canceled)

Claim 57 (Currently Amended) A base station for receiving a first transmission an uplink signal from a telephone and transmitting a second transmission first downlink signal and a second downlink signal to the telephone, comprising:

~~— a modulator operable to modulate a first data stream according to a QPSK and modulate a second data stream according to an n-level QAM to produce modulated signals;~~

~~— a multiplexer operable to convert the modulated signals to a CDMA converted signal according to CDMA;~~

~~— a transmitter operable to transmit the CDMA converted signal as the second transmission signal;~~

- a receiver operable to receive the first transmission uplink signal, wherein the first transmission uplink signal has information of a third first data stream, and the third first data stream is modulated according to a QPSK;

- a de-multiplexer operable to convert the first transmission uplink signal to a modulated de-multiplexed signal according to CDMA; and

- a demodulator operable to demodulate the modulated de-multiplexed signal to produce the third first data stream;

- a modulator operable to modulate data for demodulation according to a QPSK to produce a first modulated signal and modulate a second data stream according to an n-level PSK or an n-level QAM to produce a second modulated signal, wherein the data for demodulation includes information representing the value of n;

- a multiplexer operable to convert the first modulated signal to a first CDMA converted signal and to convert the second modulated signal to a second CDMA converted signal, according to CDMA; and

- a transmitter operable to transmit the first CDMA converted signal as the first downlink signal and transmit the second CDMA converted signal as the second downlink signal;

wherein a data rate of the second downlink signal is changeable.

Claim 58 (Previously Presented) A base station according to claim 57, wherein n is an integer and equal to or greater than 4.

Claims 59-62 (Canceled)

Claim 63 (Currently Amended) A transmission and receiving method for transmitting ~~a first transmission~~ an uplink signal to a base station and receiving a ~~second transmission~~ first downlink signal and a second downlink signal from the base station, comprising:

when the uplink signal is transmitted from a telephone to the base station:

- modulating a first data stream according to a QPSK to produce a modulated signal;
- transmitting the modulated signal as the ~~first transmission~~ uplink signal; and

when the first and second downlink signals are transmitted from the base station to the telephone:

- receiving the ~~second transmission~~ first downlink signal and the second downlink signal, wherein the ~~second transmission~~ first downlink signal has information of data for demodulation and the second downlink signal has information of a second data stream and a third data stream, the ~~second data stream~~ first downlink signal is modulated according to a QPSK, and the ~~third data stream~~ second downlink signal is modulated according to an n-level PSK or an n-level QAM, wherein the data for demodulation includes information representing the value of n; and
- demodulating the ~~second transmission~~ first downlink signal to produce the data for demodulation and demodulating the second downlink signal to produce the second data stream, wherein the second data stream is produced according to the data for demodulation; and ~~the third data stream~~
wherein a data rate of the second downlink signal is changeable.

Claim 64 (Previously Presented) A transmission and receiving method according to claim 63, wherein n is an integer and equal to or greater than 4.

Claims 65-68 (Canceled)

Claim 69 (Currently Amended) A transmission and receiving method for transmitting a ~~first transmission~~ an uplink signal to a base station and receiving a ~~second transmission~~ first downlink signal and a second downlink signal from the base station, comprising:

when the uplink signal is transmitted from a telephone to the base station:

- modulating a first data stream according to a QPSK to produce a first modulated signal;
- ~~converting~~ multiplexing the modulated signal to a CDMA converted signal according to CDMA;
- transmitting the CDMA converted signal as the ~~first transmission~~ uplink signal;

and

when the first and second downlink signals are transmitted from the base station to the telephone:

- receiving the ~~second transmission~~ first downlink signal and the second downlink signal, wherein the ~~second transmission~~ first downlink signal has information of data for demodulation and the second downlink signal has information of a second data stream ~~and a third data stream~~, the ~~second data stream~~ first downlink signal is modulated according to a QPSK, and the ~~third data stream~~ second downlink signal is modulated according to an n-level PSK of an n-level QAM, wherein the data for demodulation includes information representing the value of n;
- ~~converting~~ demultiplexing the first downlink the second transmission signal to produce a first de-multiplexed signal and demultiplexing the second downlink signal to produce a second de-multiplexed signal, ~~a second modulated signal~~ according to CDMA; and

- demodulating the ~~second-modulated~~ first de-multiplexed signal to produce the data for demodulation and demodulating the second de-multiplexed signal to produce the second data stream, wherein the second data stream is produced according to the data for demodulation; and the third data stream wherein a data rate of the second downlink signal is changeable.

Claim 70 (Previously Presented) A transmission and receiving method according to claim 69, wherein n is an integer and equal to or greater than 4.

Claims 71-74 (Canceled)

Claim 75 (Currently Amended) A receiving and transmitting method for receiving ~~a first transmission~~ an uplink signal from a telephone and transmitting a ~~second transmission~~ a first downlink signal and a second downlink signal to the telephone, comprising:

when the uplink signal is transmitted from the telephone to a base station:

- ~~-modulating a first data stream according to a QPSK and modulating a second data stream according to an n-level QAM to produce modulated signals;~~
- ~~-transmitting the modulated signals as the second transmission signal;~~
- receiving the ~~first transmission~~ uplink signal, wherein the ~~first transmission~~ uplink signal has information of a ~~third~~ first data stream, and the ~~third~~ first data stream is modulated according to a QPSK; and
- demodulating the ~~first transmission~~ uplink signal to produce the ~~third~~ first data stream; and

when the first and second downlink signals are transmitted from the base station to the telephone:

- modulating data for demodulation to produce a first modulated signal according to a QPSK and modulating a second data stream to produce a second modulated

signal according to an n-level QAM, wherein the data for demodulation includes information representing the value of n; and
- transmitting the first modulated signal as the first downlink signal and the second modulated signal as the second downlink signal;
wherein a data rate of the second downlink signal is changeable.

Claim 76 (Previously Presented) A receiving and transmitting method according to claim 75, wherein n is an integer and equal to or greater than 4.

Claims 77-80 (Canceled).

Claim 81 (Currently Amended) A receiving and transmitting method for receiving ~~a first transmission~~ an uplink signal from a telephone and transmitting a ~~second transmission~~ a first downlink signal and a second downlink signal to the telephone, comprising:

when the uplink signal is transmitted from the telephone to a base station:

- ~~=modulating a first data stream according to a QPSK and modulating a second data stream according to an n-level QAM to produce modulated signals;~~
- ~~=converting the modulated signals to a CDMA converted signal according to CDMA;~~
- ~~=transmitting the CDMA converted signal as the second transmission signal;~~
- receiving the ~~first transmission~~ uplink signal from the telephone, wherein the ~~first transmission~~ uplink signal has information of a ~~third~~ first data stream, and the ~~third~~ first data stream is modulated according to a QPSK;
- ~~converting~~ de-multiplexing the ~~first transmission~~ uplink signal to produce a modulated de-multiplexed signal according to CDMA; and
- demodulating the ~~modulated~~ de-multiplexed signal to produce the ~~third~~ first data stream; and

when the first and second downlink signals are transmitted from the base station to the telephone:

- modulating data for demodulation to produce a first modulated signal according to a QPSK and modulating a second data stream to produce a second modulated signal according to an n-level QAM, wherein the data for demodulation includes information representing the value of n;
- multiplexing the first modulated signal to produce a first CDMA converted signal and multiplexing the second modulated signal to produce a second CDMA converted signal, according to CDMA; and
- transmitting the first CDMA converted signal as the first downlink signal and the second CDMA converted signal as the second downlink signal;
wherein a data rate of the second downlink signal is changeable.

Claim 82 (Previously Presented) A receiving and transmitting method according to claim 81, wherein n is an integer and equal to or greater than 4.

Claim 83-86 (Canceled)